India’s 1970s-1990s Step-wise Growth Acceleration: Causes and Impacts

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ABSTRACT

To lower poverty and to raise living standards, many developing countries need to attain and maintain fast, pro-poor growth. Arguably the most important acceleration to occur over the last half-century has been India’s. The country had suffered both low average income and slow growth over most of its first three post-Independence decades. Unlike the short and clear-cut periods of “take-off” experienced by many countries, India’s appears to have been a two or three step process beginning in the 1970s and ending with the upward ratcheting of the early 1990s. A striking feature was the small increase in the (constant price) investment rate, implying that the dominant proximate cause of acceleration was increasing efficiency in the use of resources. Possible factors at work include the shift away from the Mahalinobis model, the liberalization and improvement in business atmosphere, the Green Revolution, and the creation of many new bank branches which raised national savings. Inequality appears to have changed little during the accelerations of the late 1970s and 1980s but it rose significantly during that of the 1990s. Even then, however, the income growth of the poorer groups, including agricultural wage earners and casual non-agricultural workers, was strong.

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1. Introduction

Acceleration into sustained growth has been a policy goal and a subject of great academic interest for over half a century. Many lower-income developing countries and some middle-income ones have been stuck in stagnation or slow growth of per capita income over significant parts of the last few decades, or have oscillated between bursts of good growth and disheartening downturns. To lower poverty and to raise living standards generally, many need to attain and maintain not just modest growth but fast, pro-poor growth. At Independence India was such a country. It has been widely noted for several decades that per capita income growth has often had to be significantly positive in order to achieve any reduction of poverty or any increase in real wages of the unskilled workers who make up most of the poverty group. And it has been hypothesized that income inequality was likely to worsen during periods of growth acceleration.

The vast literature on the process of economic growth and its correlates has, unfortunately, dealt less than would be desirable with how to accelerate from a slow start. Several decades ago, as a literature on growth began to emerge from the experience of developing countries and from the theoretical reflections of students thereof, the need for a "Big Push" was mooted by authors like Nurkse (1966) and Rosenstein-Rodan (1964), and the aerodynamic concept of the "take-off" was advanced by Rostow (1956). Since the 1960s or so those ideas have generally had less currency. The challenge remains with us, however, and an ex-post look at the experience of those intervening decades should provide some guidance to the policy maker hoping to engineer such acceleration into high sustained growth (AHSG).

A considerable amount has been learned over the years about which patterns of growth are more "pro-poor", about the dangers of Dutch Disease growth on the basis of a narrow range of primary exports that create few jobs, and about other important growth-related issues. As a first approximation, one can accept the proposition that fast growth is a usually necessary but sometimes insufficient condition for fast and sustained poverty reduction (where poverty is defined by absolute purchasing power). Short growth spurts, say at 5% per year for a few years, can be produced by favourable export prices or other bits of economic luck. But what many low-income countries really need is growth that is faster and sustained for at least a decade, preferably several. The history of the last half-century has thrown up a modest number of such cases. In some countries the acceleration to fast growth was quick, in others less so. The conditions and processes that brought about these success stories are the main raw material from which policy makers may learn what to do when confronted with stagnation in a country needing fast sustained growth. Other relevant information comes from studies of some of the key mechanisms that seem to characterize the experiences of growth acceleration, even if the studies are not directed specifically to the issue of growth acceleration.

On the growth front, the challenge can be broken into two parts – accelerating growth to a high level, and then keeping it there. Although, as discussed below, experiencing fast growth at present often makes it easier to achieve fast growth in the near future, this is not always the case; sometimes today's fast growth comes at the expense of tomorrow's. Many countries have run

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1 Although the literature on the correlates of growth is clearly relevant to this task (one would not expect to find that the recipe for acceleration to fast sustained growth was the opposite of the apparent recipe for fast growth in general), but since the episodes of AHSG are few, their presence in the data used for the typical cross-country time-series growth analysis is presumably drowned out by data reflecting other more normal experiences.

2 The “Dutch Disease” refers to the problems afflicting a country which has a strong comparative advantage in one or a few tradables which create few jobs (the case with most minerals, for example) and may also suffer price fluctuations and/or depletion such that after having become accustomed to the revenues produced by the item(s) the country has to scramble to find alternative sources of comparative advantage.
down their foreign exchange to finance a burst of investment and consumption that may generate a few years of fast growth; but that process has the seeds of its own early reversal. Success on the distribution front, such that growth will be pro-poor, involves a range of complicated issues and has been less studied than growth per se.

The comparative literature on growth acceleration remains limited, though many studies of individual countries provide important insights and information. There appears to date to have been no organized comparative analyses of the employment and distributional concomitants of growth acceleration. A valuable and systematic review of growth accelerations from the 1950s on by Hausmann et al. (2004) provides useful leads. The authors identify over 80 episodes of growth acceleration over periods of eight years, reporting that they tend to be positively correlated with increases in investment and trade and with real exchange rate depreciations. Political regime changes are also correlated with those in the direction of authoritarianism having the strongest association. Upward shifts in the terms of trade tend to produce growth accelerations that eventually fizzle out, while economic reform is associated with more sustained accelerations, though most such reforms do not produce accelerations. In fact, the vast majority of observed accelerations are unrelated to any of the standard determinants considered by these authors. This study makes it clear that there are no standard recipes to produce growth acceleration, or more precisely no general recipes built around such usual suspects as the standard reform package. On the other hand, several variables are sufficiently correlated to acceleration as to warrant further probing. That rising investment tends to go along with acceleration is certainly no surprise; here the more interesting questions are ones of timing and composition. Can acceleration get a start without an investment surge, and then spur that surge? Does public investment more often crowd out private investment or crowd it in? Is machinery investment more growth-promoting than construction? Similarly, an important role for savings is inevitable, but it is less clear how precisely increases must be synchronized with those in investment, which groups of savers can be counted on, and how much a good financial system matters in all of this. The role of real depreciation reported by Hausmann et al. (2004) is mirrored closely in most of the detailed case studies reported by Berry (2005).

Arguably the most important acceleration to occur over the last half-century is India’s. This second most populous country in the world suffered both low average income and slow growth over most of its first three post-Independence decades. It was also noteworthy as the largest stable democracy in the world, with a high level of internal heterogeneity, in ecological, cultural, and economic terms, and a recent colonial past. From before independence there were strongly conflicting visions of where the country should go, with those of Gandhi and Nehru providing the main philosophical divide. Nehru’s ideas quickly came to dominate. Later, and in more practical terms, the conflict between extensive planning and government involvement in the economy vs. more scope for markets became the main focus of differences; India was closer to the former end of the spectrum than most developing countries and more influenced by the Soviet Union. In the event, Indian governments maintained a socialist rhetoric up until the early 1980s, which was to some extent the other side of the coin from a strong anti-business ideology. Its policies were substantially guided by the Feldman (or Mahalanobis-Nehru) model, with its emphasis on the development of capital-intensive core industries rather than on the labour-intensive industries in which the country would be expected to have a comparative advantage in international trade; it was thus unusual among lower income developing countries.

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3 Episodes are defined as cases in which the growth rate of GDP per capita over eight years is a minimum of 3.5% and accelerates by a minimum of 2% (Hausmann et al., 2004, 3). This is a relatively broad definition since a 2% acceleration is a modest one.

4 Basu (2004, 19) observes that, unlike Lee of Singapore or Park of Korea, Nehru was not obsessive about growth.
in the extent of investment in heavy industry. The government played a dominant role in investment and production in the basic industries and an extensive one in controlling and regulating private sector decisions on capital formation and international trade (Bhagwati and Desai, 1970). As a large country with a definite sense of itself, India has followed its own path, in terms both of broad policy design and of response to crises as they have arisen.

By the 1970s it was clear that India’s sluggish overall growth needed an explanation. One obvious possibility was a poor natural resource endowment or, put another way, a country overpopulated relative to its natural resources. A lack of human resources, whether attributed mainly to colonial rule or not, was another possibility. Then, as growth speeded up, it was natural that some of the steps taken or events occurring around the time of the speed-up would come in for consideration as positive contributors. As usual, many elements of policy choice have received attention in this regard, including those instruments that make up the Washington Consensus in favour of more market-friendly settings, but also the relative focus on and support for economic sectors like heavy industry, agriculture, and manufacturing, as well as financial policy.

Both the timing and the (presumably related) sources and societal impacts of India’s acceleration have been the subject of much debate, with no simple story thus far winning the day. The considerable disagreement as to how India’s “take-off” should be dated relates in part to the fact that, while the 1980s clearly saw faster growth than did previous decades, it has been argued that this rate was unsustainable, hence that the take-off into potentially sustainable high growth occurred in the early 1990s, after the major economic reforms which largely eliminated the regulatory framework for industrial investment and production. For some other observers, however, the first important changes occurred in the 1970s. The issue is important since timing helps to identify the factors and policies that may be presumed to have played a role. Because distributional trends differed across the contending periods, how societally beneficial the take-off itself was depends on when it happened. In most countries the timing of major growth accelerations is fairly easy to specify, but in India this is not the case. Whatever the ambiguities of timing, the Indian case is immensely important because the total acceleration was large, the high growth has been long sustained, and by virtue of the country’s size it has affected many people.

2. Selected quantitative aspects of India’s growth acceleration.

During the period of generally slow growth to the mid-1970s there were short bursts of good growth. There were also large year-to-year swings, often associated with the performance

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5 At the other extreme, an undue focus on timing of accelerations could help to obscure the important changes that foster growth in the long run.

6 The discussion of the trajectory of India’s growth presented here focuses on changes in the fixed investment ratio and in the marginal product of capital. A number of studies including the period beginning in the 1980s estimate the rate of productivity growth and are thus able to disaggregate output growth into growth of inputs and growth of productivity. Since the 1970s are a candidate as the period of take-off and reasonably reliable productivity growth estimates do not appear to be available for this earlier period, most of the present analysis relies on the marginal product of capital as a proxy for efficiency. Comparisons with later studies covering the 1980s and on suggest the results are consistent. As Bosworth et al. (2007) point out, the Indian statistics have many serious weaknesses. Data for the formal sector are relatively good, but this sector accounted only for an estimated 42% of GDP (and 56% of that in non-agriculture) even in 1999-2000, and for 12% of non-agricultural employment and less than 5% of total employment.
of agriculture. In terms of decade-long averages the slowest growth period was 1964-1974 (2.6%), the culmination of a decline from 4.4% in the second half of the 1950s (and about 4% for the 1950s as a whole). By the 1980s the figure was up to 5.9% and the 1992-2001 decade saw the same ten-year average. The average for 1996-2006 reached 6.4% and since then growth has been even faster, leaving no doubt that, when attained, India’s high growth has been very successfully sustained.

The gross domestic savings rate underwent a rather smooth but in total quite large increase from around 10% in the first half of the 1950s to around 13% in the early 1960s and around 20% by the mid-1970s (Pandit, 1991, 4), the sort of increase that Lewis (1961) defined as a key precondition for a country to get moving quickly along a growth path. It then jumped further to reach 30% in 2003-4 (Basu and Maertens, 2007, 159). The current price investment ratio rose somewhat less rapidly, being a couple of points higher than the savings rate in the early 1960s and a couple of points lower by the early 1990s for a total increase of 7-8 percentage points over that time. But, in spite of the clear upward trends in the savings and current price investment rates, the (constant price or real) investment rate was remarkably stable, with only a small gradual increase from a bit under 21% (1993 prices) over the 1960s (ten year average) to a peak 10 year moving average of 25.3% for 1993-2002. Within this pattern of gradual secular increase the late 1970s stand out, with the ratio rising from a nearly constant level of 21-21.5% in the early 1970s to over 23% in 1978 and 1979 and nearly 24% in 1981, after the drought-induced drop to 20.9% in 1980. A rate of 24% was only achieved in one year prior to 2000. It thus appears that the late 1970s saw a very limited breakthrough on the real (fixed price) investment front, an upward shift of a couple of percentage points in a rate which has changed little and never, until the 2000-2010 decade, been very high. The bigger increase in the current price than in the constant price investment series points to a significant rise in the relative price of capital goods over the period from the mid-1960s to 1985, which was then followed by a decline after the mid-1990s, possibly a result of increased liberalization of trade. The gradual but continuous rise in the current price investment rate from 15% in the early 1960s to a peak of over 23% in the late 1980s reflects increased savings (domestic plus foreign). This rate slipped a little from its mid-1990s peak of 26.5%, before surpassing 30% from 2004 on.

The slow and, in total, small rise in India’s constant price investment ratio while the average growth rate was increasing markedly (albeit erratically) since the mid-1970s implies that the marginal output-capital ratio rose significantly. A five-year moving average reveals a set of waves with each new one hitting a higher peak, beginning in the mid-1980s (at nearly 0.25) and finally reaching 0.3 in the decade from 2000. Ten-year averages reveal an upward shift from below 0.2 for all decades ending before 1980 and fluctuating around 0.25 for decades beginning from 1980 on to the new century. The story of India’s growth acceleration thus has a great deal to do with the increased productivity of investment. New patterns of the 1990s, in particular the sharp increase in the export/GDP ratio, raised the marginal productivity

7 By decades, the increase was from 21.9% in 1970s, to 22.6% in the 1980s, and to 23.0% in the 1990s.

8 Since the current price investment ratio rose a good deal more, from a five-year average of 15.6% over 1960-64 to 22.6% over 1998-2002, and then continued for some time thereafter to rise faster than the constant price series, any serious inaccuracy of the price series for investment goods in India would affect conclusions with respect to the proximate sources of growth. In particular, if the rise in the relative price of capital goods has been overstated, then the true investment ratio rose faster than the figures show and accounted for more of the growth than estimated here and the rise in productivity for less of it.
of capital above its local trough of around 1990 but did not immediately push it above the level of the mid-1980s, though this structural shift could have played a role in the higher productivity attained a decade later. To the extent that an increase in exports raised factor productivity through a static resource allocation effect, the impact would be cumulative as the export ratio rose.

Over the longer run, therefore, the Indian story is of a traditionally low marginal output-capital ratio which then rose to provide nearly the full explanation (in this mechanistic sense) of the faster growth achieved since the worst growth decade 1965-74 (average 2.6%) when the investment rate was 21.34% and the marginal output capital ratio was just 0.12. By the decade 1996-2005 the average growth rate was 6.2%, the average investment rate 22.9% and the average output/capital ratio 0.27. These numbers are quite consistent with the idea that India’s early post-independence growth pattern was an inefficient one, through some combination of the focus on heavy industry; a low average return to investment because of its composition, with relatively high shares in construction and in inventory increase and a correspondingly low share in machinery and equipment; and a cumbersome regulatory process. Other factors that could have contributed to the low output/capital ratio would be a lack of “free growth” through the discovery of new mineral products or expansion onto new good land. The logical interpretation of the doubling of the marginal output/capital ratio would be an increase in efficiency of growth. The composition of investment changed significantly, especially in constant price terms; between 1980 and 1993 the machinery and equipment share rose from 40.3% to 61.2% as both the inventories and construction shares fell. The price of machinery and equipment fell gradually relative to GDP and sharply relative to construction investment, with this latter decline concentrated in the early 1980s as construction prices rose and machinery prices fell relative to GDP. The constant price export ratio was rising during the 1970s, when it averaged 6.9%, but fell a bit during the 1980s, to an average of 8.0%, before initiating its real surge from the early 1990s to an average of 11.2 in that decade and on to 17.9% over 2000-2002.

Regardless of one’s views on the impact of the early 1990s reforms and whether they constituted an important turning point in India’s growth process, it is clear that something happened in the late 1970s and/or early 1980s which must also be explained.

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9 The impact of the focus on heavy (basic) industries would depend on the share of total investment dedicated to them. The share of gross investment going to registered manufacturing was 19.5% over 1951/52 to 1960/61, 21.5% over 1961/62 to 1970/71 and 19.6% over 1971/72 to 1980/91 (Sundrum, 1987, 93). Even if such investment paid off rather badly, this could not explain much of the low output-capital ratio, unless that growth strategy also explains a considerable amount of other investment (e.g., in infrastructure) that was also of low productivity. The marginal capital-output ratios in mining and manufacturing were high and rising in the second two decades distinguished here, reaching 9.71 in the last one; this together with the predictably high figures of infrastructure and construction/real estate, explains the very high average of 6.04 for that decade (Sundrum, 1987, 94).

10 Since the useful life of machinery and equipment is on average lower than that of infrastructure and other construction, the overall marginal output/capital ratio may be a misleading indicator when comparisons are made across countries or periods with differences in the composition of investment. Perhaps some of the slower growth in early decades and the subsequent speed-up is thus due to the fact that these early investments paid off over a relatively long period.

11 The current price to GDP ratio, however, was also a little higher in the 1980s than the 1970s on average but jumped more sharply in the 1990s.
3. Timing of the growth acceleration?

The literature on India’s acceleration displays an intriguing penchant to identify a single turning point despite the fact that it is certainly not easy to do so. This tendency clearly owes something to the fact that different groups of reformers have a sort of “vested interest” in the conclusion that the reforms for which they were responsible or which they favoured were the most important. On the other hand, there is much agreement that the liberalizing reforms, whatever the details of their timing, deserves much of the credit for the acceleration. Given the extent of controls in India and the lack of any strong evidence that that they were well-designed and implemented, it would be very surprising if the removal of some of them did not have positive growth effects. At the same time, it should not be assumed out of hand that all or even the bulk of the growth acceleration, when it occurred, has been attributable to those reforms, or that such growth benefits as have resulted imply the desirability of going either to the extreme of free trade or of minimum government controls. These are matters requiring more in-depth analysis. The question of how growth acceleration came about in India is thus not necessarily synonymous with that of which reforms have been undertaken and which turned out to be the most important. And it may even be a moot point which reforms were “more important”; they may have interacted with each other in important ways. In any case, the lessons from India’s acceleration experience are clearly complicated by the absence of an easily identifiable take-off period, as well as the fact that tracing the impact of any reforms on growth acceleration is complicated by possibly varying lags between policy change and its growth impact. Although analysts still must try to glean understanding from the timing of change, this effort is naturally fraught with more problems in India than in those countries where the period of take-off is so clearly delineated as to be a natural starting point in the discussion of why it occurred. For India it must be accepted that there may have been no unique period of acceleration, but rather a more complicated process stretching out over 15 years or so, less a quick shift in a short period than a gradual upward drift, as suggested by the behaviour of several of the macroeconomic ratios of interest. This might be explained in terms of a gradual (albeit with significant detectable steps along the way) movement away from the original Mahalanobis model that focused on heavy industry and/or away from a highly regulated economy with considerable built-in inefficiency. Both of these features would help to explain the low marginal output capital ratio over the early period.

In any case, the identification of a meaningful point of take-off into high sustained growth requires that the subsequent growth be maintained. Its linking to policy changes or reforms requires that it cannot be equally well explained by changes exogenous to policy.

3.1 Did the Acceleration that matters take place in the 1990s?

A prominent view is that the key turning point occurred in the early 1990s; proponents focus not simply on the growth performance since the reforms of that time, but also on why the equally fast growth of the 1980s should not identify that decade as the period of take-off. Ahluwalia (2002, 67) owns that the growth of 6% after the 1991 reforms (1992-1993 to 2001-2002) was only a shade better than the 5.7% of the previous decade, but argues that the 1980s

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12 This penchant is reflected, for example, in Panagariya’s (2004, 2583) wording “it is difficult to pinpoint the timing of the upward shift in India’s growth rate”.

13 Rodrik and Subramanian (2004, 4) note that though their proposed turning point – the early 1980s, has been identified by others (e.g., De Long, 2003 and Williamson and Zagha, 2002), standard accounts like Ahluwalia (2002) and Srinivasan and Tendulkar (2003) leave the opposite impression.
growth was unsustainable given the big build-up of foreign debt culminating in the crisis of 1991. In contrast, the 1990s saw both a more stable growth rate and a “remarkable external stability” in spite of the Asian financial crash at the end of the decade. If one focuses only on the quinquennium 1992-93 to 1996-97, then the implicit acceleration vis-a-vis the 1980s would be something over 1 percentage point, still rather modest unless the unsustainability of the previous period is considered equivalent to a couple of percentage points of growth annually.

In similar vein to the fiscal deficit, it might argued that the character of the Green Revolution, while not such as to imply a one-shot pattern of gains over time, was sufficiently focussed in the first period of massification that its growth-promoting effects were felt in the 1980s (and the 1970s) but by the 1990s they had run their course.\textsuperscript{14} Though the positive impact of the Green Revolution was presumably less than before, agricultural growth over 1992-93 to 1996-97 was actually faster, at 4.6%, than during the 1980s (3.8%); it then dropped to just 2.3% over the late 1990s (Table 1). Ahluwalia (2002, 77) attributes some of the 1990s growth in this sector to the trade policies that reduced protection on industry, contributed to a 30% increase in the index of agricultural prices in relation to manufactured goods prices, and encouraged private investment in agriculture. Meanwhile, however, there was a decline in public investment in critical areas like irrigation and drainage.

Table 1. Sectoral and GDP Growth Rates, Selected Periods

<table>
<thead>
<tr>
<th>Period</th>
<th>GDP</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-72 to 1980-81</td>
<td>3.2</td>
<td>2.0</td>
<td>4.0</td>
<td>7.2</td>
</tr>
<tr>
<td>1975-76 to 1978-79</td>
<td>6.5</td>
<td>2.0</td>
<td>7.4</td>
<td>6.8</td>
</tr>
<tr>
<td>1981-82 to 1990-91</td>
<td>5.7</td>
<td>3.8</td>
<td>7.0</td>
<td>6.7</td>
</tr>
<tr>
<td>1992-93 to 1996-97</td>
<td>6.7</td>
<td>4.6</td>
<td>8.0</td>
<td>7.6</td>
</tr>
<tr>
<td>1997-98 to 2001-2002</td>
<td>5.4</td>
<td>2.3</td>
<td>4.5</td>
<td>7.8</td>
</tr>
<tr>
<td>1992-93 to 2001-2002</td>
<td>6.1</td>
<td>3.5</td>
<td>6.3</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Source: Ahluwalia (2002), except for 1975-78, sectoral growth rates, which are from the World Bank’s World Tables 1987, pp. 212-213. The figures reported by Ahluwalia are presumably in constant prices of 1993.

Although growth was not significantly higher in the 1990s than in the 1980s, the investment rate did move up somewhat and exports rose more sharply than before, with an impressive doubling of the constant price export/GDP share between 1991-92 and 2002, an upward shift that was subsequently sustained. Growing exports of Information Technology products started to have an aggregate impact during the 1990s, though it is worth noting that the foundations for this industry were laid much earlier, before most of the liberalizing reforms.\textsuperscript{15}

\textsuperscript{14} Bosworth and Collins (2007, Table 2) do report a higher total factor productivity growth in agriculture over 1978-93 (1% per year) than over 1993-2004 (0.5%).

\textsuperscript{15} Basu (2004, 15) interprets India’s great software success as the rather ironic result of two policies: first, the often-criticized practice of “over-investing” in tertiary education, and second, the decision of the Janata government in 1977 to ask IBM to leave when the company refused to dilute their 100% ownership of subsidiaries. This latter step encouraged the local production of smaller state of the art but cheaper minicomputers and microcomputers. The opening up in the 1990s then allowed this sector to take full advantage of world markets.
Among the many authors who have argued that the 1980s growth could not last is Panagariya (2004, 2582), who noted that “Growth during the 1980s was fragile, highly variable across years, and unsustainable.”\(^{16}\) Among the issues raised about 1980s growth, therefore, the important one seems to be unsustainability. Panagariya (2004, 2589) points out that the fiscal deficit (national and state levels) climbed from 8% in the first half of the 1980s to over 10% at the end and that foreign and domestic debt were rising, as current public expenditure jumped from 18.6% of GDP to nearly 25% in 1989-90. Whether and in what sense this fiscal path was unsustainable is less relevant here that the extent to which it produced growth which a sustainable fiscal trajectory would not have permitted. Srinivasan and Tendulkar (2003) give it much credit for the rapid growth in the second half of the decade. If, say, it was responsible for an average of 2 percentage points growth over 1985-86 to 1990-91, then without it the average decanal growth would have been 4.5% instead of 5.7% and the 1990s would have seen an acceleration of 2.5%.\(^{17}\) As of the early years of the decade beginning in 2000, the fiscal deficit was just as high as in the early 1990s. Interestingly, the deficit declined in the early 1990s as growth hit its peak but then rose as growth slowed.\(^{18}\) Apparently a rising deficit was not as expansionary in the late 1990s as it was argued to have been earlier.

Some authors feel/presume that the 1990s were the turning point since they witnessed the “pivotal” reforms, and explain the lack of acceleration vis-a-vis the 1980s partly in terms of the still incomplete nature of those reforms as the 1990s proceeded, together with conflicts within the governing coalition that somewhat undermined their credibility, and the inability of state monopolies to provide crucial inputs to the economy in the amounts needed (Virmani, 2004). Virmani does confront the puzzle of faster growth in the 1980s despite apparently modest reforms and attributes it in part to the credibility of the reforms undertaken then, and the related change in rhetoric of government and of intellectuals, which affected the economic environment for business. In this latter argument, his view substantially parallels that of Rodrik and Subramanian.

3.2 Was it the 1980s?

Unless the growth of the late 1970s and the 1980s is persuasively judged to be unsustainable, one must conclude that acceleration occurred before the 1990s (see below). And, in terms of the lessons to be learned, it is arguably less important whether the turnaround is dated from the mid-1970s or from the early 1980s than whether it is dated somewhere within this longer period as opposed to the early 1990s; in the latter case the evidence would more

\(^{16}\) It is arguable that variability of growth over the decade was not severe enough to be of much importance, unless it signalled a problem likely to have a negative impact on average future growth. As Mathur (2004, 3229) points out, though the coefficient of variation of overall growth did fall modestly between the 1980s and the 1990s, that coefficient actually rose in manufacturing (and industry as a whole) as well as in services, and fell only in agriculture et al. Presumably the other cause of the overall decline in the coefficient was the falling share of agriculture in GDP. In any case neither the 1980s nor the 1990s saw a single year with growth below 3% except for the crisis year 1991-92 itself.

\(^{17}\) In this connection it is interesting that the deficit had already reached its peak of 10.9% of GDP in 1986-87, well before the only three strong growth years of this part of the period (1988-89 to 1990-91). Government expenditures also were relatively flat over 1985-86 to 1988-89 at about 4% of GDP above their earlier level. The argument that either the level of expenditures or the size of the deficit was what generated the fast growth must therefore presume some significant lags between the increase in the former variables and the resulting jump in growth. This is a complicated matter.

\(^{18}\) Data from Ahluwalia, 2002, 70.
clearly support conventional Washington Consensus reforms whereas in the former it would paint a more complicated picture.

Of the three possibilities most often mooted, a simple look at the trajectory of GDP would incline one towards the early 1980s, as argued by both Rodrik and Subramanian (2004) and Virmani (2004). Relatively sophisticated statistical criteria designed to identify turning points favour this choice. In addressing the timing-of-acceleration issue, Rodrik and Subramanian present time series not only on GDP per capita but also GDP per worker and total factor productivity (TFP). While the first two series leave considerable ambiguity as to whether the early 1980s or the latter half of 1970s is a more obvious date for the turnaround, the TFP series shows a clearer inflection point in the early 1980s.\(^{19}\) It may be noted that the same is true of the marginal output/capital ratio, whose five-year moving average jumps to nearly 0.25 over 1980-84.\(^{20}\) Since, however, one is more likely to define economic success in terms of GDP per capita or per worker than in terms of such underlying factors as TFP trends, we are inevitably left with arguments on both sides as to when acceleration began,\(^{21}\) partly because we are focussing on different things. In any case, since India was still a largely agricultural country and an important oil importer, its annual growth rate has been more affected than most by weather and by oil shocks.\(^{22}\) In trying to identify policy-related determinants of growth performance generally, and points of take-off in particular, one must try to abstract from exogenous forces such as these.

Rodrik and Subramanian (2004) argue that an acceleration of note occurred in the early 1980s and that it was due to a shift of attitude by the national government in favour of private business in 1980 when Indira Ghandi returned to power, re-aligned herself, and reined in the

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\(^{19}\) This is not, however, the conclusion to be drawn from the more recent TFP estimates of Wu et al. (2017, 108) whose series begins in 1981; it shows a net decline through 1987, then the beginning of a fairly smooth upward trend through 2011.

\(^{20}\) As usual, however, much depends on choice of period duration. Over the four year period 1975-78 this moving average was 0.27 and in fact over 1967-70 it had reached the same level. It is not possible to make a clear identification of turning points without an interpretation of the economic impact of bad years like 1979, and 1971 and 1972.

\(^{21}\) There has been some discussion, which these authors review, as to just when, in the neighbourhood of 1980, the turnaround is best dated. Thus while Rodrik and Subramanian (2004, 5) find that the single break in all series they study occurs in 1979, they also note that Hausmann et al. (using the criterion that average growth in the seven years after the break is at least two percentage points above that of the previous seven years) date it in 1982, and that Wallack (2003) also finds evidence of a growth break in the early to mid-1980s. This issue does not deserve inordinate attention, given that the data are “contaminated” by the effects of large exogenous shocks in some years, such that careful dating would only make sense if those effects could be removed. Statistical techniques to identify a turning point are thus less plausible in India unless one has already taken into account the effect of major exogenous phenomena, in particular the droughts and the terms or trade shocks (oil). Since 1979 was a year affected by a large negative shock of this sort, the choice between late 1970s and early 1980s will inevitably be arbitrary in the absence of a persuasive analysis of the size and duration of that negative shock. Equally of concern for this discussion are the weaknesses in estimates not corresponding to “benchmark” years for which there are relatively good data on the size of the informal sector (Bosworth et al., 2007).

\(^{22}\) This complication raises difficulties whether one focuses on changes in the marginal output-capital ratio or in TFP.
former socialist rhetoric. This shift was then reinforced by Rajiv Gandhi on his taking power in 1984. These authors describe the new view as being “pro-existing business” rather “than pro-market”, in the sense that it was aimed at raising the profits of incumbents but not at benefiting consumers or facilitating the entry and success of new competitors. In the early 1980s true liberalization was by and large anathema to organized business and Mrs. Gandhi wanted business support. In the Rodrik-Subramanian scenario, the Indian economy had been chronically underperforming given its relatively strong political and economic institutions, rule of law, and so forth in such a situation fairly minor changes in the policy environment might conceivably make a big difference. This is consistent with the above discussion of the output/capital ratio and with the fact that longer-run estimates of TFP growth like those of Wu et al. (2017, 108) show considerable increases in that variable from 1987 on of an average of 1.3% per year. In this view the growth effects were due to the more positive atmosphere for business and to specific steps like easing access to imported inputs.

Rodrik and Subramanian complement their argument that several aspects of the pattern of 1980s growth are consistent with their acceleration hypothesis with the contention that other major interpretations are not. They note that output gains were most marked in activities and states that would be most advantaged by the attitudinal shift – formal manufacturing built-up under the earlier policy regime in those states where the earlier investments had been concentrated. They cite studies by Ahluwalia (1995) and Unel (2003) to the effect that manufacturing experienced a surge of productivity in the 1980s. Meanwhile, they critique several competing hypotheses offered to explain the acceleration, including:

i) A favourable external environment. They note that most countries slowed down during this decade and that India’s terms of trade hit bottom in the early 1980s.

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23 An earlier, similar, view is that of De Long (2003), who speculates that the change in official attitudes in the 1980s was more important than any of the specific policy reforms, but still has “a hunch” that the growth of the 1980s would not have been sustained without the reforms of the early 1990s, though accepting that there is no hard evidence to that effect.

24 These Indian reforms are likened to those of South Korea in the 1960s and 70s (also primarily pro-business) and contrasted to those of Latin America in the 1990s (pro-market).

25 As of 1980 manufacturing accounted for about 16% of GDP and the registered subsector for about 11%, judging from the 1983-84 share of registered in total manufacturing value added reported by Sundrum (1987, 30). Manufacturing’s contribution to overall GDP growth acceleration (assuming its growth ratcheted up by 3 points as did that of industry (Ahluwalia, 2002, 68) would be 0.33 percentage points, that is, a rather small amount. Clearly the bulk of the growth speed-up would have had to come from the other sectors, some of it admittedly an indirect effect of the manufacturing growth.

26 This was later confirmed and analysed by Mazumdar and Sarkar (2004).

27 Since those terms of trade did stop falling around 1980 one might attribute a turnaround to that fact, with the slow growth of the previous period due partly to the ongoing terms of trade (TOT) decline. The impact of this effect, however, is naturally limited by the fact that India was not a trade-oriented nation at this time. Rodrik and Subramanian’s Chart 3 does suggest an enormous fall in TOT (from an index of about 150 to about 80 over the 1970s). The direct effect of such a decrease, given exports and imports at, say, 8% of GDP would have reduced GDP growth by at most 4% total over the 1970s, or 0.4% per year. Given that a lot of the imports were intermediate and capital goods whose rising scarcity would have some multiplier effects, the impact would no doubt be greater. This factor might strengthen the argument that the late 1970s saw the shift in basic performance of the economy.
ii) The unsustainablility of 1980s growth. The consolidated public-sector deficit, which averaged 5% in the 1970s, rose to 9% in the 1980s. As the authors argue, to be persuasive this critique must explain how the fiscal expansionism led to the increase in productivity. They contend that measured increases in capacity utilization (for manufacturing only) could not explain more than a third of the large turnaround in TFP growth from the early 1980s.

iii) External liberalization. They claim there was little if any such liberalization, that what there was occurred in the second half of the decade, and that indicators of openness showed only modest increases until the large jumps of the 1990s.

iv) Behaviour of the real exchange rate (RER). There was a depreciation (rising rupee/dollar ratio) in the late 1970s, then an appreciation before the index stabilized over the mid-1980s, and finally a large real depreciation of over 40% over 1986-1992-93. The authors doubt that this was a big factor in productivity growth. It is apparent that the increasing export ratio is rather closely correlated with the RER, with a break in its protracted increase occurring with a short lag after the appreciation and resuming shortly after the onset of the devaluation. But this export surge does not appear to have been associated with a growth acceleration, so even if the RER was the instrument which brought it about, that would not obviously make the RER the source of the growth acceleration which in any case, as Rodrik and Subramanian point out, preceded the major devaluation.

v) The Green Revolution, which is seen as too small to explain large changes in aggregate outcomes. It is likely that, if the Green Revolution was a significant factor in growth acceleration, it had its impact substantially through indirect effects of one sort or another.

vi) Public investment, which rose by 4% of GDP between late 1970s and late 1980s. The authors discard possible demand effects and estimate that productivity enhancing effects would be too small to make much difference.

vii) Internal liberalization. They note that Joshi and Little (1994, 71-72) imply that there was no more that a modest, albeit not trivial, degree of such deregulation during this period. In arguing that attitudinal change was more important than the specific policy steps, Rodrik and Subramanian claim that there was little “paper trail” pointing to such steps. Nayar (2005) and others argue that there was such a trail in the 1980s, i.e., that relevant reforms did occur, but

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28 It is interesting to note that the big jump in penetration ratios (Rodrik and Subramanian, 2004, 36) occurred in the late 1990s, as growth was slowing.

29 Effects of the type identified, for example, by Mellor (1976).

30 Note that their Chart 8 suggests a strongly inverse association between private corporate investment and household investment. If this is a result of the latter being the residual in a calculation beginning with total investment based on purchase of capital goods, from which private corporate investment is subtracted, then there is a serious possibility that the negative association is a spurious result of measurement error. If the household investment series is not plausible in the light of other data and a general understanding of its determinants, it deserves a second look. If household investment in fact did not nosedive in the early 1980s as these figures indicate, then total investment was presumably underestimated at that time, in which case the estimated productivity increase might not have occurred in the early 1980s but at some later or earlier time. If total investment rose sharply in the early 1980s this might still be viewed as consistent with the authors’ hypothesis, but the main impact might not have been on productivity but simply on the investment rate, which according to the official figures did not rise during this period at all. Or it could be a combination of the two factors.

31 Desai (1999), Pursell (1992) and Virmani (1997) attribute the 1980s acceleration mainly to liberalization, with Pursell emphasizing that on the trade side. Such analysts tend to see the reforms of 1980s more as a precursor of
Nayar carries this argument back to what he considers to be the more pivotal period of the mid-1970s.

3.3 Arguments for a late 1970s take-off

Nayar (2005) makes an interesting case for the late 1970s, on both empirical grounds (the details of the growth trajectory) and its being plausible that the policy changes of the mid-1970s could have been significantly growth-promoting. He notes (Nayar, 2005, 6) that reform has always been partial and fitful in India, with the political leadership wary of changes that would affect its constituencies or that would appear to benefit the rich. And exogenous factors, both economic and political, have, at least until fairly recently, played a significant role in determining both the rate of growth and the urgency of policy change. Policy changes occur at moments of crisis such as 1975, 1980 and 1991, in the last of which India came closer to default than even before (Basu, 2004, 20). Nayar (2005) judges that a setting conducive to unleashing India’s growth potential arose in the mid-1970s after several decades of relative failure which, however, did in various ways contribute to creating the conditions for take-off, partly though a learning process on the part of leaders, especially Indira Gandhi.

The high capital needs implicit in the Mahalanobis-Nehru ISI strategy put the third five-year plan (1961-62 to 1965-66) into trouble but it was rescued by foreign donors, whose largesse (in the form of loans and grants accounting for 19.3% of investment undertaken in this plan) was driven by geopolitical considerations—in particular the need to support India in its economic competition with China (Nayar, 2005, 13). Though the still-sacred heavy industry strategy remained a drag, this high level of foreign aid helped to produce average growth of 5.0%. But when droughts of 1965/66 and 1966/67 were added to the model’s inherent problems a severe recession hit the US (through the World Bank and the IMF) pressured for devaluation as part of a package of reforms, construed as the first step towards a more general liberalization of the economy. The timing of the devaluation–in the midst of a serious drought, and the optics–giving in to American pressure, produced an economic and political disaster. Policies then swung to the left and the Congress Party split over nationalization of all the banks (Nayar, 2005, 14), one of many public-sector encroachments into the previously private sector domain. The combination of radical policies, the droughts, the need to deal with Bangladeshi refugees and the removal of American aid produced stagnation (average growth of 2.6% over 1965/66 to 1974/75). Riots and industrial unrest came with it; the impact of the oil price hikes helped raise inflation to a peak of over 25%. 1973 was a turning point. Mrs. Ghandi had become disillusioned, especially by the results of the government takeover of the wholesale wheat trade; she was suspicious that her Communist allies had manipulated her and convinced by the oil shocks that economic isolation was not the answer for India (Nayar, 2005, 17). Her change of heart led her to rescind the wheat trade takeover and to get tough on unions, fearing that wage concessions would fuel further inflation. The resulting harsh crackdowns symbolized an end to the “socialist” strands of policy, even though the rhetoric lived on.

Though, like all countries facing serious economic imbalances leading to crisis, India had to undertake an adjustment, the stabilization package applied at this time was “home-
made”, both in the sense of being the product of internal analysis rather than an IMF recipe, and consequently of involving somewhat different details. It included increased excise taxes and railway fares, a wage and salary freeze and other steps, which together brought inflation to heel. Little or no conditionality was attached to the large IMF loans of the early 1970s. After 1971, when the world’s fixed exchange rate regime ended, the government linked the rupee to the weakening pound sterling, which then dropped 20% in value over 1971-75; for India this was a sort of devaluation by stealth and a shrewd political move given the disastrous experience with open devaluation in the mid-1960s (Joshi and Little, 1994, 56). The real exchange rate fell despite the unprecedented bout of inflation in the early 1970s, with export value rising fast as a result, although export volume rose only modestly (Nayar, 2005, 18). This devaluation reflected a new recognition of the importance of an effective interface with the world economy. So did the automatic licensing of imported inputs for export-oriented industries and the liberalized finance for the export sector at concessional interest rates. Cash incentives for exports were increased and extended to more industries.

Nayar (2005, 20) dates the beginning of the liberalization process at about 1975. One set of policy changes touched directly on export activities, but there was a more general relaxation of government controls on the investment and output of the private sector, previously justified as part of the planning-based system and of curbing monopoly practices. The government now allowed automatic increases of output by 25% over 5 years without prior permission for 15 export-oriented engineering industries. Nayar sees the reforms of 1980-81 as either a second phase or simply a continuation of those of the mid-1970s. By the time of her return to power in 1980, Mrs. Ghandi was prepared to go farther than before; for example, the permission for automatic expansion of capacity by 25% over five years was extended to a much larger number of industries (Nayar, 2005, 24). Average growth over the four years 1975-78 was a healthy 6%. The next year 1979-80, saw a shrinkage of 5.2%, due to the combined negative effects of the drought – which cut agricultural output by 13.4%, tied with 1965-66 for the biggest drop in post-independence history, and the second oil shock.

The late 1970s also saw what was arguably the first upward shift of a couple of points in the constant price investment ratio, with the next one not occurring until around 2000. The current price investment rate rose much more and earlier – from about 15% around 1970 to 20% by the end of the decade, but after a further increase was back down to under 23% in the first years of the 2000 decade. If the real investment series is taken as the best predictor of underlying growth potential, and if one takes these investment data literally this provides another piece of evidence that there was a meaningful change in the late 1970s.

While a number of potentially important points of inflection appear to have taken place in the early 1980s, as discussed above, one that appears to date from the early 1970s is that of the gross domestic savings rate (Basu and Maertens, 2007, 157,159). One prominent explanation for this, especially plausible since household savings (including those of non-

34 These authors refer to “some clever anticipation on the part of a few senior bureaucrats who saw the importance of devaluing the rupee by stealth.”

35 Joshi and Little (1994, 142) estimate that the initial pegging to the pound and then to other currencies, together with the depreciation which was permitted between 1974/75 and 1978/79, allowed a 23% depreciation in the real effective exchange rate (29% when adjusted for export subsidies), which contributed to the growth of exports.

36 In light of the various other weaknesses of India’s national accounts data (Bosworth et al., 2007) one wonders whether the investment goods price series, and with it the constant price investment ratio, is very reliable.
incorporated business) have always dominated total savings in India,\(^{37}\) is the nationalization of banks announced by Indira Gandhi in 1969. This forced banks to open branches in remote “unprofitable” areas; the resulting surge in the number of branches coincided with the rise in financial savings. Real interest rates also rose over time (Basu and Maertens, 2007, 158) but the dominant impact on savings appears to have been the growth in financial intermediation (Shome, 2007, 464). If Bell and Rousseau (2001, 153) are correct in their conclusion that “the financial sector was instrumental in promoting aggregate investment and output, but also in the steady shift toward industry that has characterized India’s development” then this may have been the most important turning point of all for Indian economic growth, and the 1970s the period when the seed was planted that explained much of the later growth acceleration.

3.4 Overview on the timing issue

As long as one concludes that the 5% growth of 1960/61 to 1964/65 somewhat overstated the long run potential of the “model” then in force\(^{38}\) and as long as the 1965/66 to 1974/75 growth of 2.6% did not greatly understate the “basic” growth performance then, it seems clear that a meaningful acceleration did occur at some point thereafter. The chronically weak performance previously is not surprising in light of the model implemented at the time, the lack of attention to agriculture and its needs, and the excessive regulation which must have constrained growth. The argument that this basic performance started to improve from its low of the early 1970s (the five-year moving average bottomed out at 2.1% over 1970-74) is consistent with the growth numbers and with the idea that by this time the drag effect of the focus on heavy industry was starting to wane, that the relaxation of some regulations on the private sector and on exports would have released growth potential, and that the real (albeit disguised) devaluation associated with the peg to a depreciating pound sterling had a positive growth impact.

Linking policy changes (especially gradual ones) to economic performance is hard under any circumstances, except in rare cases where one has some strong independently based evidence (e.g., microeconomic data of some sort) on the length of the lags between policy change and performance. Typically, the effects of reforms are likely to be distributed over time. In principle one would expect both the reforms of the 1970s and those of the 1980s to have had an impact, and it might be hard to assess their relative importance on the basis of the growth numbers. The De Long (2003) and Rodrik and Subramanian (2004) contention that a key element of what made the difference was Mrs. Gandhi’s changed attitude to business when she returned to power in 1980 is especially hard to judge through independent evidence; some (like Panagariya, 2004) have argued that attitudinal changes are only likely to have real effects if they are translated into policies which do have effects and that important changes were made in that decade\(^{39}\), though Nayar cautions that Panagariya’s arguments relate mainly to reforms in the second half of the decade (whereas growth had clearly accelerated by the mid-1980s). The Rodrik and Subramanian argument that not much in the way of enacted or implemented reform occurred even in the 1980s is contested by Nayar and others.

\(^{37}\) The structure of domestic savings remained relatively stable at least from the early 1950s through the mid-1980s, with household savings typically accounting for 65-75% of the total, private corporate savings for under 10% and public savings for 15-20% (Pandit, 1991, 5)

\(^{38}\) Though the war with China was a negative factor, even as the fiscal situation had become unsustainable.

\(^{39}\) The author judges that the 1980s reforms were crucial to building politicians’ confidence that policy changes in the areas of devaluation, trade liberalization and delicensing of investment could be done without disruption. This helped to make the 1990s reforms politically acceptable (Panagariya, 2004, 5).
Pending further work based on growth figures that are adjusted for exogenous events (i.e., on underlying growth performance) and that provide at least partially independent evidence on the impacts of the various reforms undertaken (e.g., on the investment and output growth of the sectors presumed to be affected), the most plausible view seems to be that of Nayar, who combines the contention that the real reform process did start in the mid-1970s (including the real but initially disguised devaluation) with the observation that, if one takes account of the fact that the 1979/80 recession was mainly due to the extremely severe drought, then a significant performance breakthrough did occur in the late 1970s, making this a logical choice as the period of turnaround (if one is to be chosen).

If so, the main policy messages would seem to relate to the positive effects of the first steps of deregulation away from an extremely constraining prior structure and the benefits associated with real devaluation and with improved export incentives of other types. The constant price export ratio shifted up from an average of 5.92% of GDP over 1970-74 to 7.68% over 1975-78 (and the current price ratio rose from 4.05% to 6.31%). These ratios fluctuated only mildly with no trend until the late 1980s when they began their larger and longer upward shift.

It is thus plausible that the late 1970s marked an increase in India’s reaping of the potential from international trade, through some combination of the ongoing real devaluation and trade policy steps. It is also widely accepted that the second export surge contributed to the growth of the early 1990s. The story is complicated however. Growth was fast from 1988 on, except for the fiscal crisis year 1991. The increase in the export/GDP ratio began about 1988, very soon after the start of a period (roughly 1987-94) during which the real effective exchange rate fell sharply (Rodrik and Subramanian, 2004, 27). The export ratio increased further between 1998 and 2002 as growth was slowing. Several aspects of this record are worthy of note. First, two periods of growth acceleration are associated with an increasing export/GDP ratio – the late 1970s and the late 1980s to early 1990s and in both cases the real exchange rate was devaluing. In the other period of (more dramatic) increase in the constant price export ratio (from 12.8% in 1998 to 19.9% in 2002, though a smaller increase from 11.2% to 15.2% in current price terms) growth was a little slower than in the early 1990s or the late 1980s. This period saw no real exchange rate devaluation. Doubtless there are many hypotheses that would be consistent with these aspects of India’s experience. One possibility is that export growth that results from an exchange rate devaluation tends to produce more economic growth than one that is due to freeing of trade. The former creates an across-the-board increase in the demand for tradables and may thereby be more likely to increase capacity utilization and to encourage investment in capacity expansion. A second possibility is that raising a country’s export ratio from a low to a medium level generates more growth benefits than does a further comparable increase, presumably because despite the inefficiencies which may be built into trade restrictions, there is a tendency for the most beneficial trade to occur when the trading ratio is low and for trade involving items with a smaller comparative advantage to be added later as liberalization proceeds. Finally, it is possible that a negative terms of trade shift has lessened the benefits associated with the most recent trade surge. As the export ratio continued to rise – the constant price series rose much faster than the current price one, reflecting a considerable negative terms of trade shift on the export price side since the mid-1990s.

40 The view that 1975 was a turning point has been held by Raj (1984).
Note that if either exports or imports are viewed as a key motor of concurrent growth (i.e., with no lags) and the 1980s are viewed as the breakthrough decade, then one would conclude that rising trade was not behind the better performance. The same goes for rising investment (constant price but not current price). Since comparative experience provides strong evidence that one or both of investment and exports is often an important part of the growth story, this would make India’s experience somewhat unusual, with rising productivity constituting nearly the whole story, and with that increase not associated with a significant shift towards export activities.

The view that there was no single all-important turning point in India’s growth pattern gets support from the fact that the rise in factor productivity was not one-shot. Whether it ratcheted up at several discreet short periods or rose smoothly, and this is less clear in the case of some variables, there was decade by decade advance. This is apparent, as already discussed, in the marginal product of capital as measured by the marginal output/capital ratio. It also holds for labour productivity and total factor productivity, as estimated by Bosworth et al. (2007) and shown in Table 2. Attempts to date a turning point very narrowly are even less plausible because of exogenous shocks and serious data problems in non-benchmark years (Bosworth et al., 2007, 38).

Table 2. Growth of Output, Output per Worker and Total Factor Productivity, Selected Periods, 1960-1999

<table>
<thead>
<tr>
<th>Period</th>
<th>Output</th>
<th>Output per worker</th>
<th>Total Factor Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-73</td>
<td>3.3</td>
<td>1.3</td>
<td>0.2</td>
</tr>
<tr>
<td>1973-83</td>
<td>4.2</td>
<td>1.8</td>
<td>0.6</td>
</tr>
<tr>
<td>1983-93</td>
<td>5.0</td>
<td>2.9</td>
<td>1.7</td>
</tr>
<tr>
<td>1993-99</td>
<td>7.0</td>
<td>5.8</td>
<td>2.8</td>
</tr>
</tbody>
</table>


4. Wages, Income Distribution, and Employment

Whatever one's final conclusion on the matter of when and why Indian growth has accelerated, it is important to understand the fallout in the labour market and on income distribution and poverty. The timing of acceleration is likely to give clues as to what mechanisms had impacts on these variables. Employment figures are of only modest value in sorting this out, given the still substantially agricultural character of the economy and the traditionally low levels of open unemployment. Data on consumption and incomes are thus likely to be more revealing. Fortunately, there is considerable data on family consumption levels, dating well back in time, and a smaller but still useful body of information on incomes. Judging from it, the distribution of income in rural and in urban India appears to have been relatively stable for several decades after independence (more precisely after data collection began in the 1950s) until the 1990s, when there was “a pervasive increase in economic inequality” (Deaton and Dreze, 2002, 3740). This 1990s increase in inequality reflected widening dispersion of incomes among states, rising rural-urban gaps (real agricultural wages grew at 2.5% while public sector salaries grew at almost 5%) and rising intra-urban inequality (Deaton and Dreze, 2002, 3739-40).

Official poverty figures suggested a dramatic drop in both rural and urban areas between 1993-94 and 1999-00 after a small decline 1987-88 to 1993-94 in rural areas and a large one in urban areas. Revisions by Deaton and Dreze (2002, 3730) to correct for a change in the questionnaire design and for poverty lines leads to the conclusion
For the pre-acceleration period up until the mid-1970s the limited data do not suggest dramatic changes. Sundrum (1987, 143), using National Sample Survey (NSS) consumption data by income categories, reports gradual increases in expenditures over 1950-51 to 1977-78 for all broad income categories, but largest for the lower income groups. These data, however, suffer from possible biases which may obviate this conclusion (Berry, 2005, Chapter 3). Wage data hint at further stability or a possible decline in equality during the 1980s. Jha (2000, 21) calculations indicate that real agricultural wages rose quite significantly between the 1970s and the late 1990s, about 75% in total or about 2.7% per year, with the sharpest increase occurring between the mid-1970s and the late 1980s and a more modest upward drift in the 1990s. Deaton and Dreze (2002, 3737) report an increase in agricultural wages at about 5% in the 1980s and 2.5% in the 1990s. In their detailed study of agricultural wages over 1987-88 to 1999-00, Kijima and Lanjouw (2004, 21) also report a slowdown of wage growth as between 1987/8 to 1993/4 and 1993/4 to 1999/0. Since the agricultural labour force is increasingly made up of those with no education and low social status, increases in this wage can be presumed to lower poverty in rural India. All sources seem to concur that wage growth was fast in the 1980s, with Jha’s figures suggesting the same for the late 1970s as well. With daily agricultural wages increasing at 5% in the 1980s – faster than average per capita output, it is possible that some improvement in distribution was occurring, at least within the lower segment of the income hierarchy.

Vasudeva-Dutta’s (2005, 7) study of wage earnings of adult males in all sectors of the economy reveals an average increase of 86% over 1983-99, or 4% per year in the real weekly mean wage of regular workers (those with permanent jobs). Meanwhile the increase was less for casual workers, 61% or 3.0%. For regular workers the increases were moderately faster over 1993-99 (4.6%) than over 1983-93 (3.6%), and a little faster for casual workers (3.2% vs. 2.9%). This pattern, taken together with that for agricultural wages, suggests that the 1980s may have witnessed an income convergence between agricultural and non-agricultural casual workers, but a rising gap between non-agricultural casual workers and all regular workers (most of whom would be in non-agriculture).

Over the 1990s (at least over 1993-99), agricultural wages showed the slowest increase at about 2.5%, casual non-agricultural wages at something over 3% (since all casuals’ earnings that the decline was of comparable magnitude (and substantial) over both periods. Kijima and Lanjouw (2004, 21) conclude that for rural areas there was clearly a significant decline in poverty over the first of these two subperiods and that poverty likely declined during the second one, but probably at a slower rate.

42 In this connection they cite Dreze and Sen (2002) and Sarmah (2000). The figures presented by Dreze and Sen (2002, Table A.6) imply growth of agricultural wages of 4.15% per year over 1980/81 to 1990/91 and 1.95% per year over 1990/91 to 1999/2000 and less than 1% per year over the 1970s. They report an average increase of 2.8% over 1970/71 to 1999/2000 based on a regression; the simple calculation between first and last year implies growth of just 2.3% per year.

43 The classification by permanence of job has been considered by a number of authors to be more useful for the analysis of wage structure in India, in part because the National Sample Survey does not collect data on whether the worker is employed in a formal or an informal enterprise. Vasudeva-Dutta (2004, 2-3) reports that about 57% of regular workers are in the registered sector but only 10% of casual workers are, thus nearly all of the latter are in the informal or unregistered sector.
grew at 3% and that of the non-agricultural part was presumably growing faster, and regular workers at 4.6% (1993-99) a considerable divergence between these broad groups appears to have been underway. In addition, inequality within the category of permanent workers rose over 1993-99 (as the Gini climbed from 0.3923 to 0.4293) while that among casual workers fell, especially during 1983-93 (from 0.292 to 0.2644). The higher inequality in the former group is easy to explain, given the range of skill levels represented; education is a powerful determinant of income for these regular workers but not for casual workers, where industry affiliation is more important and state of residence is the strongest single determinant studied (it explains over 20% of the variance in 1999). In short, the wage data are consistent with the increase in inequality identified by Deaton and Dreze (2002) and many others.

The sorts of distributional changes wrought by India’s take-off clearly depend on how it is dated. If, as seems most reasonable, the acceleration is seen as a two or three step process, the first step or steps – occurring at some point between the late 1970s and the mid-1980s, appear to have been accompanied by a relatively stable income distribution, perhaps even an improvement. The last (1990s) step has, however, been associated with a considerable increase in inequality. Hypotheses abound as to whether and to what degree these different distributional trends are causally related to the corresponding phases of growth acceleration. The extension of bank branches over the 1970s and 1980s are estimated by Burgess and Pande (2003) to have had a positive distributional impact. Balakrishnan and Parameswaran (2006) conclude that primary sector production showed an upward inflection a little before the onset of the Green Revolution (around 1967/68), possibly associated with the expansion of irrigated land in the preceding decade and a half. This could have fostered a better distribution. As for the income concentration of the 1990s, several of the liberalization reforms may have played a role, as might the declining public investments in agriculture, beginning in the 1980s (Basu and Maertens, 2007, 151). The limited dimensions of the formal private sector (under 9 million people in 2001, or just 2.6% of total employment) and its slow expansion have sometimes been attributed to what Basu and Maertens (2007, 162) call the “complicated and ill-conceived laws that govern the labour market”, some of which date back to the 19th century. Besley and Burgess (2004) find that pro-worker legislation has a negative effect on investment and productivity in the registered manufacturing sector, while Aghion and Burgess (2003) add that this negative impact has increased in the post-liberalization period.

**Employment trends: Possible links to changing inequality**

Although it fell from 72% in 1951 to about 57% in 2001 according to the figures of Table 4, the share of employment in agriculture remained high – above that of countries at

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44 Unless a falling share of agricultural workers among all casual workers had per se a significant positive effect on the average income of all casuals, in which case the earnings of non-agricultural casuals might also have been rising at less than 3%.

45 Unfortunately, the author does not calculate the overall inequality for the total wage sector. Its seems fairly clear that it will have increased, given the fact that along with the increased inequality in the regular wage sector and the decrease in the casual sector, there was an increase in the average hourly wage ratio of the first to the sector group from 2.87 in 1983 to 3.06 in 1993 and on up to 3.32 in 1999.

46 For a detailed treatment, see Mazumdar and Sarkar (2008a). In a good number of Latin America countries the trade liberalizations and other reforms of the 1970s and 1980s were accompanied by increasing income inequality (Berry, 1998; Bulmer-Thomas, 1996)

47 Which, however, suffer from the statistical errors described by Bosworth et al. (2007).
comparable levels of per capita income, in spite of a much lower productivity of labour in there (just one-fifth of that in services according to Bosworth et al., 2007, 41) which would expect to lead to a faster shift towards other sectors. But considerable shares of the formal jobs in manufacturing and services have been concentrated in skill-intensive activities (Bosworth et al., 2007, 34). In manufacturing this is probably in part a legacy of the original growth model; in services it owes something to the Information Technology sector, though other factors must have been at work also, perhaps including the problematic labour legislation mentioned above. The highly dualistic size structure with its “missing middle” – the relative lack of medium-sized firms emphasized by Mazumdar and Sarkar (2008b), is presumably one cause of the failure to create a reasonable number of formal sector jobs. The combined employment share of the registered private sector and the public sector, which rose from 7.3% in 1960/61 to 10.3% in 1981, appears then to have slipped to 9.8% in 1991 and to perhaps 8.5% in 2001.\(^\text{48}\) The share of these “formal sector” jobs in non-agricultural employment fell faster; after rising from about 26% in 1961 to 35% in 1971 it subsequently fell to 33% in 1981, 27.1% in 1991 and just 19.4% in 2001. Both public sector and private formal employment growth slowed sharply, with the former expanding virtually not at all over 1991-2001. A reasonable guess is that the shrinking share of formal in non-agricultural and in total employment was a factor in the rising inequality since the early 1990s, whereas prior to that time its rise or relative stability may have contributed to improving distribution or avoiding a worsening.

Table 4. Aspects of the Composition of Employment in India, 1951-2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Agricul.</th>
<th>Industry</th>
<th>Services</th>
<th>Non-Agricul.</th>
<th>Registered private non-agricul.</th>
<th>Unregistrd. private non-agricul.</th>
<th>Public sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>103,640</td>
<td>15,270</td>
<td>24,311</td>
<td>59,581</td>
<td></td>
<td></td>
<td></td>
<td>143,221</td>
</tr>
<tr>
<td>1961</td>
<td>119,098</td>
<td>19,312</td>
<td>27,128</td>
<td>46,440</td>
<td>5,040</td>
<td>34,350</td>
<td>7,050</td>
<td>165,538</td>
</tr>
<tr>
<td>1971</td>
<td>129,890</td>
<td>20,812</td>
<td>29,671</td>
<td>50,483</td>
<td>6,742</td>
<td>33,010</td>
<td>10,731</td>
<td>180,373</td>
</tr>
<tr>
<td>1981</td>
<td>153,016</td>
<td>29,972</td>
<td>39,528</td>
<td>69,500</td>
<td>7,395</td>
<td>46,651</td>
<td>15,454</td>
<td>222,516</td>
</tr>
<tr>
<td>1991</td>
<td>176,881(^a)</td>
<td>98,648(^b)</td>
<td>7,677</td>
<td>71,913(^c)</td>
<td>19,058</td>
<td>275,529(^a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>187,762(^a)</td>
<td>142,885(^b)</td>
<td>8,652</td>
<td>115,096(^c)</td>
<td>19,137</td>
<td>330,647(^a)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Extrapolated from 1981 figures based on the growth rates presented by Bosworth et al., 2007, Table 4.
\(^b\) Calculated as ‘total’ minus “agriculture.”
\(^c\) Calculated as “non-agriculture” minus “registered private non-agricultural” minus “public sector.”


Although the employment share of industry showed an upward trend, at least since the early 1980s, this was provided mainly by the construction sector, while the share of manufacturing was nearly flat at 11-12%, albeit showing a modest upturn during the decade from 2000. Within manufacturing the great bulk of employment was still found in the unregistered sector, though sources differ on just how much. Lee et al. (2007, 411) and Subrahmanya (2002, 81), though drawing on somewhat different sources, both report a modest growth in registered (organized) sector employment over about 1980-1995 (when the latter series ends) and large increases in the unregistered sector. As of the mid-1990s the registered

\(^{48}\) Assuming total employment growth of 2% over 1981-2001, as suggested by Bosworth et al., 2007, Table 3.
sector had only around 20% of all manufacturing employment, a share that, according to Lee et al. (2007), then fell further to 17% by 2002. Amazingly, registered employment in 2002 was barely (12%) above the 1980 level, having fallen since the late 1990s; it thus represented only about 2.3% of total employment by 2002.

Among the characteristics of recent economic growth in India that they found disturbing, Mazumdar and Sarkar (2008b, 1) highlighted the strong persistence of dualism within manufacturing, whether within just the registered component or the sector as a whole. Too many firms are at the two ends of the size spectrum and, simultaneously, the technology and capital intensity spectra. They blame this dualism for hampering the expected dynamic role of manufacturing. Growth was instead led by the tertiary sector, both in output and in employment terms, but not mainly through absorbing labour from agriculture at low levels of earnings but at average earnings significantly above those in manufacturing. Among the causes of the damaging dualism suffered by manufacturing they identify labour legislation and protection of small-scale units, both of which discourage growth above a smallish size, as well as a human capital policy biased toward the tertiary level. Whereas more resources dedicated to basic education would have been beneficial to small and medium manufacturing firms, a plentiful supply of people with higher education increases the competitiveness of more capital-intensive industry and more human capital-intensive services, including those around information and communications technology (ICT). Part of this same package of outcomes has been the relatively slow decline of agriculture’s share of employment, presumably the result of a limited demand in non-agricultural activities for the sort of labour agriculture can release.

As might be expected, there has been much discussion and concern over the slow growth of formal sector employment, especially surprising and worrisome in the context of increasingly rapid growth. Evidence on the division of workers by permanent vs. casual employment and on wage trends is more encouraging, however. Vasudha-Dutta’s economy-wide figures on the split between male regular workers and casual ones confirm that the latter category grew somewhat the faster of the two over 1993-99, though a bit slower over 1983-93. Over this 16 year period the shares of the two groups thus changed little; in light of the growth achieved it is somewhat surprising that the share of permanent employment has not risen. Further perspective comes from the data on wage and income trends. With incomes rising across the board at reasonably comparable rates, compositional changes like that between formal and informal activities are not necessarily of great concern by themselves. It would appear that the unregistered sector, although growing in relative size, was doing at least reasonably well over this couple of decades, though its rather rapid increase in size over the 1990s might have something to do with the slowing wage growth of casual workers.

5. Conclusions and Policy Implications

The most plausible “acceleration” story for India is a two or three step process beginning in the 1970s, and with the last upward ratcheting occurring from the early 1990s. But it is and will no doubt remain difficult to sort out which period saw the most important changes, and how the processes and outcomes of one period were causally related to those of others. A quite unusual and striking feature of India’s acceleration, regardless of what timing is accepted, is the small increase in the (constant price) investment rate. Even as growth accelerated by over 5% since its trough in 1965-74, this rate only eased up, implying that the dominant proximate cause of acceleration was a rising output/capital ratio, which in turn suggests that rising

49 Over the slightly longer period 1981-2001 it appears that the (differently defined and including women) formal sector share fell markedly. Possibly the latter’s decline is exaggerated by data errors; in any case the survey-based data of Vasudha-Dutta are the more reliable for what they measure and they tell a less pessimistic story.
efficiency has been more important than in most other cases of acceleration, a conclusion strongly supported by Wu et al. (2017) in their comparison between India and China. Plausible candidates to explain such rising efficiency, corresponding to different periods, include the shift away from the Mahalinobis model, the decreasing weight of regulations, the coming of the Green Revolution, the various phases of liberalization, the improvement in business atmosphere and others.

Why India’s growth accelerated is part of the same question of why it was slow earlier. One interesting hypothesis is that growth acceleration was finance-led, with the nationalization of the banks in 1969 and the forced creation of many new bank branches in the new two decades, the key single step in that process. It is probable, but not certain, that the timing of the upward shifts in growth rates was related to the improvements in the long-run sources of growth. Most improvements in the underlying sources of growth have their impacts with lags that render ambiguous their links to the timing of acceleration, which in any case is unclear in the Indian case. The real devaluation of the mid-1970s may have been a spur, as suggested by the notable rise in the constant price export ratio at this time.50

The accompanying changes in equality remain murky for the accelerations of the late 1970s and 1980 but a best guess is that overall inequality changed little. The 1990s speed-up was accompanied by significantly increased inequality. It has helped to create the oft-commented surge in the size of the “middle class”—those with access to cars and other accoutrements of modern life; these are the top decile or so of the income distribution and all of the evidence indicates that growth after the early 1990s favoured them. But, though slower, the income growth of all other major groups, including agricultural wage earners and casual non-agricultural workers increased strongly.

As with growth improvements, there are competing hypotheses as to why inequality has risen. Rising returns to higher education have combined with the growth of high-tech and other capital-intensive sectors in a context of prevalent dualism. Possibly that dualism and the policies that support it, together with the opening up of the 1990s have played significant roles. India’s recent growth period is reminiscent of Brazil’s over a longer period in the degree of dualism, which produced one of the world’s highest levels of inequality.

Several policy lessons emerge from India’s experience of growth acceleration. One is that, when it starts low, productivity can be raised markedly in a fairly short period of time. This is very good news for countries that might suffer the sorts of bureaucratic and other inefficiencies for which the Indian economy was famous. That opening the door for more international trade can spur growth is not a novel conclusion, but India’s experience suggests that devaluation to make all tradables more competitive internationally may be a more efficient tool than reduction of trade barriers. Within the area of finance, the expansion of banking access may both facilitate savings of lower income families and raise productivity through widened access to credit, a factor also showing up in the experience of Indonesia (Berry, 2005).

50 More generally, devaluation has been judged to play a significant role in India’s balance of trade (Singh, 2002) and to have a positive (but modest) effect on employment (Das and Pant, 1996).
References


